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ABSTRACT

Research at Tennessee Technological University indicated that library and instructional materials were not being utilized. Additional research showed that graduates of the teacher training program did not use their school library fully or draw upon the media skill of the librarian. The coordinator of the Learning Resource Center (LRC) and a professor in the Department of Educational Psychology and Counselor Education developed an interdepartmental, interdisciplinary course that develops the research and knowledge utilization skills of teacher trainees and at the same time changes the student's concept of the LRC, encourages use of library materials, and implements the concept of instructional design in the teacher education program. Eight issues in educational psychology are focused upon in the course: informational skills, constructing behavioral objectives, discipline, motivation, learning, personality, and student evaluation. Participants in the class, with the help of library science students, find articles in a variety of reference collections on these major issues. The students then read the articles, evaluate them, write abstracts of them, and submit the abstracts to the class instructor. Library science students then evaluate the abstracts and return them to the coordinator. While this evaluation is being performed, the educational psychology professor provides background material on major course questions. This background information then serves as a framework for class discussion of the research abstracted by the students.

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Using Educational Research in Teaching Teachers

Ben E. Pitts

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Research at Tennessee Technological University indicated that library and instructional materials were not being utilized by students within the College of Education. A survey of recent graduates from the teacher preparation program suggested that teachers did not use the school library where they were employed. The idea of teacher and librarian working together as a team in the instructional program did not exist in practice.

It became apparent that some action was needed to change the concept of the school library, improve use of library - media materials, and implement the concept of instructional design in the teacher education program.

The philosophical assumption upon which a plan of action was devised is imitative behavior. It is the belief of those planning the program that imitative behavior is basic to the learning process. Imitation facilitates learning by helping the student to respond appropriately to the proper environmental cue as he or she copies a correct and successful model. In imitative learning, correct response to environmental cues can be made the first time, thus eliminating periods of "trial and error" learning. A preliminary phase of imitation is found to be useful in the early stages of learning because the individual can meet with a reasonable degree of success. This provides for success rather than a failure experience. Data indicate that the provision of a model in actual or symbolic form is an important social agent for the transmission

and controlling of behavior.

It is reasonable to assume if one of our educational objectives in teacher education is to develop the skills of effective and efficient techniques of educational communication, then the stage for modeling must be set during training. Practitioners learn by doing and the teacher training years provide a golden opportunity for the presentation of models which will facilitate learning and help reach the targets of various courses within the training program. The importance of practicing what one teaches cannot be stressed too greatly.

By practicing what we teach the recognition that student teachers enter teacher education programs with varying degrees of competence to perform certain skills becomes an important concern. In the planning stages of the team effort, one administrator said it well.

"If one of our objectives is to teach that instruction should begin at the appropriate rung on the task ladder in order to enable the learner to meet with success rather than failure experiences then the teacher education program has to provide a model for imitation. Let's face it! Teachers teach as they are taught."

The administration of the Learning Resources Center (LRC), a department within the College of Education, is the responsibility of the Coordinator. This position is one-half time administrative and one-half time instructor. The Coordinator approached several faculty members after the planning sessions searching for an instructor who would be willing to carry on a team effort, especially designed to foster the use of library/media materials.

An instructor in the Department of Educational Psychology and Counselor Education agreed to participate in such a program. The course designated is FOED 223, a course dealing with the nature of the process of learning, factors that effect the learner, application psychological principles to teaching and active educational research.

Eight major issues in educational psychology are focused on. These are informational skills, constructing behavioral objectives, discipline, motivation, learning, personality, and student evaluation. The instructional strategy involves a team approach. The Coordinator and the Professor from the Department of Educational Psychology and Counselor Education enter the course together. The instructor introduces the course, makes a philosophical statement concerning the purpose and aim of the course, and introduces the Coordinator of the LRC. The Coordinator then assumes the major teaching responsibilities for a two week period at the beginning of each quarter.

Students find articles relative to the major issues of the course using Current Index to Journals in Education, Research in Education, Psychological Abstracts, and Education Index. At this point library science students, students currently participating in a course taught by the Coordinator entitled Reference Materials, are brought in to assist educational psychology students locate materials. Library science students exit after the first two weeks.

Educational psychology students are ask to find research articles on

constructing behavioral objectives, discipline, motivation, learning, personality, and student evaluation.

Students in educational psychology are then asked to read the article and write a three paragraph abstract about each article. First, the student writes a paragraph summarizing what he or she has read. This paragraph covers the major points of the article and identifies the problem, concern or issue involved in the article and any conclusions.

Second, each student is asked to evaluate the article and include the narrative of that evaluation in the second paragraph. The evaluation is based on problem raised, previous work cited, objectives stated, hypotheses formulated, assumptions made, population stated, sample drawn, instruments used, design, procedure, safeguards taken, observations recorded, findings assembled, statistics interpreted, interpretations discussed, conclusions reached, limitations recognized, further work projected, improvements suggested, and clarity of the report. This evaluation is accomplished by utilizing the following evaluation form. Students are asked to evaluate the article from 5 (excellent) to 0 (poor). They then follow up by completing the Composite Score form and by calculating an average score. The final rating scale will provide a letter grade for the article under evaluation.

THE PROBLEM

The problem was clearly stated in theoretical terms.	Excellent 5 4 3 2 1 Poor
The problem was clearly stated in operational terms.	Excellent 5 4 3 2 1 Poor
The variables measured are clearly defined.	Excellent 5 4 3 2 1 Poor
External variables are identified and controlled.	Excellent 5 4 3 2 1 Poor
An appropriate basis was used in selection of the variables.	Excellent 5 4 3 2 1 Poor
A workable and verifiable hypothesis was formed.	Excellent 5 4 3 2 1 Poor
The hypothesis was an outgrowth of some theory or problem.	Excellent 5 4 3 2 1 Poor
Hypotheses were formed on the basis of empirical research.	Excellent 5 4 3 2 1 Poor

Score _____

DEVELOPMENT OF THE INSTRUMENT

Variables under observation are directly measurable.	Excellent 5 4 3 2 1 Poor
Criterion variables are realistic.	Excellent 5 4 3 2 1 Poor
Parameters for item selection were adequate.	Excellent 5 4 3 2 1 Poor
A pilot study was conducted to select items.	Excellent 5 4 3 2 1 Poor
Tests were run on item validity.	Excellent 5 4 3 2 1 Poor
The basis on which scales were selected is adequate.	Excellent 5 4 3 2 1 Poor
Error variance caused by response mechanisms is made clear.	Excellent 5 4 3 2 1 Poor
Error variance attributable to interaction among scale items is made explicit.	Excellent 5 4 3 2 1 Poor
Error variance caused by items is clear.	Excellent 5 4 3 2 1 Poor
Error caused by scales is stated clearly.	Excellent 5 4 3 2 1 Poor
A pilot was conducted to test instrumentation reliability.	Excellent 5 4 3 2 1 Poor
Validating keys are included in the study.	Excellent 5 4 3 2 1 Poor
Reliability measurements are sufficient.	Excellent 5 4 3 2 1 Poor

Score _____

THE DESIGN

The population is specified.	Excellent 5 4 3 2 1 Poor
Adequate sampling procedures were used.	Excellent 5 4 3 2 1 Poor
The sampling procedures were clear.	Excellent 5 4 3 2 1 Poor
The statistical model chosen to be used in the test is appropriate to the methodology, population, and hypotheses under consideration.	Excellent 5 4 3 2 1 Poor
The level of significance was stated and justified.	Excellent 5 4 3 2 1 Poor

Score _____

PROCEDURES

The study can be easily replicated.	Excellent 5 4 3 2 1 Poor
A sufficient sample was used.	Excellent 5 4 3 2 1 Poor
Directions are stated clearly on how the instrument is to be used.	Excellent 5 4 3 2 1 Poor
Working and word placement biases are identified.	Excellent 5 4 3 2 1 Poor
An 80 percent response was elicited from the population.	Excellent 5 4 3 2 1 Poor
Respondent characteristics are sufficient to justify analysis.	Excellent 5 4 3 2 1 Poor
Interview techniques and procedures were standardized.	Excellent 5 4 3 2 1 Poor
The strategy chosen for administering the instrument was selected for high yield returns.	Excellent 5 4 3 2 1 Poor
The grouping schemes used resulted from appropriate tests for validity and reliability.	Excellent 5 4 3 2 1 Poor
The study administered treatments to minimize extraneous sources of error.	Excellent 5 4 3 2 1 Poor

Score _____

ANALYSIS

The criterion measured was appropriate for the study's objectives.	Excellent 5 4 3 2 1 Poor
There was evidence of reliability of the criterion measured.	Excellent 5 4 3 2 1 Poor
The statistical assumptions for a valid test were satisfactory.	Excellent 5 4 3 2 1 Poor
The level of significance for the objectives was appropriate.	Excellent 5 4 3 2 1 Poor

Score _____

Summarize the evaluation as follows:

The Problem	Score _____
Development of the Instrument	Score _____
The Design	Score _____
Procedures	Score _____
Analysis	Score _____
Total Score	_____ divided by 50 = _____

The following will serve as a basis for evaluation of the overall article. (Round off to the nearest whole number.)

- For a grade of A, 4 quality points
- For a grade of B, 3 quality points
- For a grade of C, 2 quality points
- For a grade of D, 1 quality point

The second paragraph of the abstract contains a narrative summary of the evaluation process pointing out the overall average score, the strong points of the article and the weak points. The third paragraph of the abstract contains the educational psychology student's immediate "gut" level reaction to the author. For example, "I liked the way the author wrote. He spoke to my needs."

Students are encouraged to evaluate research articles when possible, however, essay articles are permitted. When essay articles are used, the student is asked to use only those items on the check list appropriate to an essay article. The same evaluative procedure is followed.

At the end of the two week period all papers are collected. The educational psychology professor assumes the teaching responsibilities of the class. Abstracts written by the educational psychology students are assigned a number to protect the privacy of the student and distributed to library science students who worked with the educational psychology students in helping them locate materials.

Library science students then score the educational psychology abstracts from 1 (poor) to 5 (excellent). Comments are also written on the abstracts. However, no student signs his or her name. Papers are then scored by the Coordinator and returned to the educational psychology class.

After the abstracts are returned, group discussion is emphasized. Background information on the major issues is provided by the psychology professor through lecture. This background places the issues in

historical perspective, identifies various points of view, and cites current research trends in the area. Abstracts are then utilized by the educational psychology students in small group discussion. Conclusions are drawn from current research presented within the group.

This hands on approach develops demonstrable skills and evaluates those skills. Students become consumers of educational research, while learning cooperativeness and developing individualized instruction.

This innovative approach encompasses the following: interdepartmental cooperation, interdisciplinary cooperation, team teaching, student participation in the form of teaching and group discussion, reliance on current research, development of informational skills, supplemental use of the textbook for background information, students teaching students and group interaction skills are fostered.

An evaluation of the course is conducted by the instructor at the end of each quarter. The following evaluation is typical of these evaluations.

The course was evaluated by 105 students involved on the basis of ten (10) questions which are used by the University to evaluate instruction. The instructor is rated on a scale of 1 (poor) to 5 (excellent). The mean scores are given beside the question.

- | | |
|---|-----|
| 1. My instructor seems well prepared for the class. | 4.2 |
| 2. The stated goals of this course are pursued. | 4.2 |
| 3. The academic climate of this class is conducive to learning. | 4.0 |
| 4. Grades are assigned fairly and impartially. | 4.5 |

- | | |
|--|-----|
| 5. My instructor is available for out-of-class consultation. | 3.9 |
| 6. Assignments are related to objectives of this course. | 4.3 |
| 7. My instructor has an effective style of teaching. | 4.9 |
| 8. Teaching techniques used in this course are appropriate. | 4.2 |
| 9. Overall, this instructor is among the best I have had. | 3.9 |
| 10. My instructor periodically checks progress in learning. | 3.7 |